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Funding for Performance and Equity: Student Success in English Further Education Colleges

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Abstract

The impact of performance funding on community college student outcomes is a contested issue. Performance funding policies in most U.S. states involve too small a proportion of funding to change college behavior. English further education colleges are similar to U.S. community colleges. 1992 policy reforms in England centralized policy control, and implemented a per-pupil funding formula; 10% of all funding is based on student success but other components of the funding formula pay colleges more money for enrolling disadvantaged students. This research uses five years of student level data to test the impact of these policies. Overall student success rates rose by 10% during the five-year period, with the largest gains made by ethnic minorities, adult basic education students, and students from disadvantaged neighborhoods. Although the English system depends on regulatory agencies that do not exist in the U.S., the major assertion of this research is that market-based funding policies—if properly designed—can promote equity in educational achievement.

Keywords: performance funding, performance accountability, student success, community colleges



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Financiamiento por desempeño y por equidad: Éxito de los estudiantes en escuelas de enseñanza superior inglesas.

Resumen

El impacto del financiamiento por desempeño en los resultados académicos de los estudiantes universitarios es una cuestión muy disputada. Las políticas de financiamiento por desempeño en la mayoría de los estados de EE.UU. son muy escasas como para tener un peso sustantivo en la modificación de políticas universitarias. Las escuelas de enseñanza superior inglesa son similares a las universidades comunitarias de EE.UU. En 1992 se aprobaron reformas a las políticas de control centralizado en Inglaterra y se comenzó a implementar una fórmula de financiamiento por estudiante: 10% de todo el gasto se basaba en el éxito del estudiante y otros componente otorgaban mas dinero a las universidades por inscribir estudiantes de grupos desfavorecidos. Esta investigación utiliza cinco años de información sobre los estudiantes para testear el impacto general de estas políticas. El nivel de éxito general de los estudiantes aumento en un 10% durante esos 5 años, con incrementos mayores en los estudiantes provenientes de minorías étnicas, adultos estudiando su escolaridad básica, y estudiantes de barrios desfavorecidos. Aun cuando el sistema inglés depende de agencias de control desconocidas en el caso de EE.UU. la afirmación mas importante de este estudio es que cuando están debidamente diseñadas, las políticas de financiamiento basadas en principios de mercado pueden promover equidad en los logros educacionales.

Community colleges provide the pathway to a better career for students who lack the time, financial resources, or educational background to attend a four-year institution, but the benefits of a community college education are much greater for those who graduate from a degree or certificate program than those who dropout (Grubb, 2002). Unfortunately, national graduation rates for community college students are quite low. Six years after initial enrollment only 36% of community college students received any degree or certificate. The results are worse for African American and Hispanic students, 26% and 30%, respectively (U.S. Department of Education, 2002).

The picture is much brighter in England. *English further education colleges*—referred to as further education colleges—are similar to *U.S. community colleges*—referred to as community colleges—in that they are the primary education providers for low income adults. Success rates in further education colleges—defined as whether or not a student successfully passes the qualification they are enrolled in - increased by an impressive 18% from the 1997–98 to 2003–04 academic year (Learning & Skills Council, 2004a, 2005). The gains were strongest for ethnic minorities, students from “deprived” areas, Adult Basic Education (ABE) students, and students with learning disabilities.¹ How did England achieve these results? This article focuses on the role of performance funding and regulatory control, which are the components of its performance accountability system.

¹ *Deprived* areas refer to geographic areas that receive high scores on a multidimensional index of deprivation (Learning & Skills Council, 2002).

Literature Review

Performance accountability has been identified as one solution to the problem of unsatisfactory student outcomes in community colleges. Traditionally, accountability has focused on fulfilling legal requirements, such as civil rights legislation, whereas the contemporary accountability is focused on performance (Behn, 2001). Performance accountability refers to public policies which attempt to align college goals with government goals. Three categories of performance accountability are *performance funding*, *performance budgeting*, and *performance reporting* (Burke & Minassians, 2003). In performance funding, a portion of funding is directly tied to performance on key indicators through a funding formula. In performance budgeting, policymakers may consider performance on key indicators when considering funding allocations. In performance reporting, funding is not tied to performance, but public reporting of performance is theorized to create incentives for improvement.

Recently U.S. state policy has moved away from performance funding in favor of performance reporting. In 2003, 15 states had performance funding programs compared to 17 in year 2000, 21 states had states performance budgeting programs compared to 28 in year 2000, and 46 states had performance reporting programs compared to 30 in 2000 (Burke & Minassians, 2003). Some states are still experimenting with radical performance accountability programs. For example, Colorado has instituted a statewide voucher program in its higher education system. Instead allocating state funding to institutions, all students receive a flat-rate voucher which may be used towards tuition at any college or university (Harbour, Davies, & Lewis, 2006).

There is a surprisingly small amount of research on the impact of performance accountability programs on community college student outcomes. One nine-state study by Dougherty and Hong (2005) found no relationship between the strength of performance accountability system and community college student outcomes relating to remediation, retention, graduation, transfer rates, and job placement. The study highlighted an important problem with performance funding; in isolation performance funding rewards a very limited number of outcomes to the detriments of other aspects of educational quality. Therefore, performance accountability can lead to unintended consequences such as a decline in academic standards and creating a disincentive to serve students who have lower likelihoods of success.

U.S. literature on the impact of performance accountability on student outcomes is limited for several reasons. First, U.S. performance accountability policies generally involve too small a proportion in overall funding to induce behavioral changes in colleges. Second, research, especially cross-state studies, tends to oversimplify performance accountability systems. More attention should be paid to individual mechanisms within the system, and how these mechanisms interact with each other as a whole. Clearly, performance accountability policies can have unintended consequences, but are these consequences unavoidable or can they be overcome by regulatory agencies and a well-designed system?

This article provides insight into these issues by presenting results from a quantitative study on the impact of performance accountability on student outcomes in further education colleges. The funding system in England attempts to balance its strong funding component with additional funding for colleges that serve “disadvantaged” students.² In addition, regulatory controls—

² “Disadvantaged” students are defined as students coming from “backgrounds which have disadvantaged them” (Learning & Skills Council, 2002), and are eligible for additional funding. These include

specifically college inspection and external assessment of student work—are designed to overcome the perverse incentives created by performance funding.

The two-part research question is, first, how has the structure of funding policy and regulatory control created incentives and mechanisms to increase student success? Second, what has been the impact of performance accountability on student success over time? Because the impact of performance funding is theorized result from the economic incentives it creates, the theoretical framework of quasi-markets provides a useful lens. The analysis of English policy is followed by statistical modeling using five years of student level data to ascertain the impact of policy on student success. The final section discusses policy implications for the U.S.

Suitability of a U.S.—England Comparison

A basic understanding of further education colleges is prerequisite for a comparison of U.S. and English policymaking. Further education colleges began as vocational training institutions and, in a country obsessed with class, were held in low regard by the more genteel echelons of society (Pratt, 2000). As educational opportunity reached a larger proportion of society, and as jobs increasingly required a stronger foundation of academic knowledge, enrollment in further education colleges skyrocketed and provision became a mix of academic and vocational instruction (Melville, 2000).

Today, more than 4 million students are enrolled in further education colleges (Learning & Skills Council, 2004b), out of a population of 50 million people (National Statistics, 2005a).³ By far the largest set of further education institutions are the general further education colleges, with 3 million students enrolled in the 2003–04 academic year.⁴ The analyses presented in this article focus on general further education colleges, but will refer to them as further education colleges.

Like community colleges, further education colleges have a mission to serve disadvantaged students. Both types of institution are the main education providers for low-income adults, students seeking vocational training, and students who need ABE, such as literacy instruction. In both countries, enrollment is highest for courses in business, information technology, and health care (Learning & Skills Council, 2004b; National Center for Educational Statistics, 2004).

There are important differences as well. First, further education colleges typically offer *qualifications*, with coursework ranging from a few weeks to several years, as opposed to degrees. These qualifications resemble certificates offered by community colleges. For example, further education colleges offer full-time, full-year qualifications in database management, which are analogous to earning an advanced certificate in community colleges. Further education colleges generally do not offer degree programs, such as the Associate's degree, and they generally lack the well-articulated transfer function that exists in Community colleges.

adult basic education students, those living in deprived areas, those with mental health problems or drug dependencies, political asylum seekers, and others (Learning & Skills Council, 2002).

³ Further education colleges are one provider of English post-compulsory education, which ends at age 16. The other types are universities, work-based learning providers (apprenticeships), and adult and community learning centers.

⁴ Further education colleges can be divided into four types: sixth-form colleges, which educate 16- to 18-year-olds; specialist colleges, which focus on specific fields such as horticulture or performing arts; and general further education colleges.

Second, although 83% of students enrolled in further education are older than 18 (Learning & Skills Council, 2004b), further education colleges also educate a large proportion of the country's 16–18 year olds. Third, England has a strong national policymaking system, whereas in the U.S. each state has an autonomous community college policymaking framework (Education Commission of the States, 2000). Therefore, the policy implications from this English case-study relate to U.S. state policymaking, not federal policymaking.

Theoretical Framework

Quasi-markets provide a useful framework for understanding funding and regulatory control policies in England. Johnson (1999) states that the four aspects of social services are strategy, funding, regulation, and provision. Generally, quasi-markets involve the separation of state finance from state provision, alongside the introduction of competition in the provision of services (Johnson, 1999; Walsh, 1995). Voucher systems in education are one example; funding follows students in their choice of schools, competition to attract students leads to increases efficiency (in theory), and institutions failing to attract enough students are forced to exit the market.

Market based policies can be used to align the incentives of providers with the overall goals of central government. The principal-agent relationship plays a central role here: the principal (central government) pays the agent (individual colleges) to perform pre-specified services (Bartlett, Roberts, & Le Grand, 1998a). The principal must decide on the set of performance indicators to assess performance. Performance funding is generally resisted by colleges because it reduces budget stability, it undermines autonomy, and because the performance indicators chosen are often too simplistic to be valid measures of performance at college level.

Analyzing the incentives created by principal-agent funding arrangements is central to the analysis of funding policy. The smaller the amount of performance funding and the greater the number of performance indicators this funding is divided by, the less incentive colleges have to improve their performance on these indicators. The ineffectiveness of performance funding in many U.S. states can be partially attributed to having too small an amount of funding tied to too many indicators (Burke & Minassians, 2003).

Creating incentives for one kind of behavior can have unintended side effects. When performance is based on a single indicator—for example student success—providers have an incentive to focus their energy on that indicator, potentially at the expense of other activities that may be important to provision. Funding solely on the basis of student success would create strong incentives to lower academic standards. Additionally, performance funding for student success tends to exacerbate educational inequalities because colleges serving disadvantaged populations are likely to receive less performance funding than colleges serving affluent populations. Allocating additional funding for colleges that serve disadvantaged populations can help counterbalance this unintended side effect.

Monitoring/regulation costs are the amount spent to ensure that agents (colleges) are acting in the interest of the principal (government). Monitoring costs decrease when the incentives of the agent are aligned with the incentives of the principal, or when both parties can agree on a shared mission. Similarly, when trust between the principal and agent increases, monitoring costs decrease. Monitoring costs increase when performance is difficult to measure and involves many outcomes.

Walsh (1995) describes a specific quasi-market form in which a central organization has control of overall strategy, and ultimate control of funding while semi-autonomous regulatory agencies are responsible for the different aspects of regulation. Monitoring costs are the costs incurred by these regulatory agencies. The idea is that the central organization “steers” but does not

“row” (Bartlett, Roberts, & Le Grand, 1998b). 1992 policy reforms in England created a similar policymaking system for further education colleges. The Department for Education and Skills (DfES) retained control of overall strategy; separate agencies, accountable to the DfES, became responsible for funding, inspection, and external assessment of student grades. The goal of these agencies was to ensure that agents (the colleges) act in the interest of the principal, the DfES.

Funding Policy and Regulatory Control in England

Overview of Policy Reform in English Further Education

Before 1992, funding and policymaking for further education colleges was very similar to the current system used by California community colleges (Jaquette, 2005); colleges were funded through a combination of local property taxes and block grants from the national government to local education districts. These districts were responsible for hiring and firing, curriculum design, financial administration, and allocation of funds to individual colleges (McLure, 2000).

In 1992 there were dramatic reforms in English further education. National legislation moved policymaking control from the local districts to the central government. Centralized regulatory agencies were created to regulate the different aspects of provision, such as funding, inspection, external assessment of student grades, etc. As a part of this effort, the new funding agency devised a performance-based per-pupil funding formula. Before this reform, block grant funding was given to local districts. After the reform, funding followed individual students to the college they decided to attend, essentially creating a national voucher system. The funding formula pays institutions additional funding for enrolling disadvantaged students and, currently, 10% of total funding depends on student success (Learning & Skills Council, 2002). The government created a centralized data system to track the progress of all students in the country and to allocate formula funding to institutions based on individual student progress. This data system, called the *Individualized Learner Record*, was the source of quantitative data used in this study.

After the reform, each college became responsible for its own financial administration and solvency. These responsibilities had previously been the domain of local education authorities. Additionally, within each college, the lay board of governors was given increased oversight power of school finances and employment of senior management. Collectively, the 1992 reforms are commonly referred to as *Incorporation Reform* because they forced colleges to behave more like private corporations.

The passage of Incorporation Reform legislation was quickly followed by a high-profile report entitled *Unfinished Business* which detailed the low retention and success rates under the prior further education funding and control framework (Audit Commission & Office for Standards in Education, 1993). The evidence from *Unfinished Business* was instrumental in securing the support of colleges during the implementation of the strong external accountability policies created in the Incorporation legislation (Davies & Rudden, 2000).

The Per-Pupil Funding Formula

This section utilizes the quasi-market framework to analyze Incorporation funding policies and regulatory agencies created incentives and mechanisms to increase student success rates. Table 1

below shows the total number of full time equivalent students (FTES) in all of English further education, as well as total funding, and average funding per FTES student.⁵ Total funding for further education has risen consistently since the 1999–00 academic year, while average funding per student peaked in the 2001–02 academic year.

Table 1

Full-time Equivalent Students (FTES) and Funding in Further Education Colleges, 1994–95—2003–04

Year	FTES students	Total funding (\$millions)	Average funding per FTES (\$)
1994–95	914,000	5,326	5,827
1995–96	989,000	5,372	5,432
1996–97	1,027,000	5,425	5,282
1997–98	1,020,000	5,289	5,186
1998–99	1,004,000	5,093	5,072
1999–00	977,000	5,302	5,427
2000–01	953,000	5,514	5,786
2001–02	970,000	6,078	6,266
2002–03	1,051,000	6,483	6,169
2003–04	1,117,000	6,899	6,176

Funding columns use constant 2002 £ converted using average 2002 exchange rate.

Source: National Statistics (2005b).

The per-pupil funding formula is the tool by which this funding is allocated from the central government to individual colleges. The formula was first implemented in the 1993–94 academic year (McLure, 2000). The funding formula would more precisely be called a per-qualification funding formula because colleges are paid on the basis of each qualification a student undertakes. However, throughout the paper I will refer to the per-pupil funding formula to stress the fact that funding follows each student. The amount calculated in the formula is intended to cover teaching as well as fixed costs such as building and equipment. To increase stability, colleges are guaranteed at least 90% of previous year's funding (Learning & Skills Council, 2002).

Analysis of the funding formula is based on funding guidance documents sent from the central funding agency to individual colleges from 1998–2003 (Further Education Funding Council, 1999b, 2000, 2001; Learning & Skills Council, 2002). Although there have been incremental changes from year to year, the formula remained largely the same until the 2002–03 academic year when the policy reforms of Blair's Labour government took effect (Jaquette, 2005). Due to space limitations this article focuses on the most recent funding formula and not on how funding policy changed over time.⁶ The 2002–03 funding formula is presented in equation (1). Each of its components is explained in turn.

⁵ These funding amounts differ from funding calculations shown later in the paper, because later calculations are based on a subset of adult students, while Table 1 is based on all students in further education colleges, including 16–19 year old students.

⁶ Detailed analyses of how the formula changed over time appear in Jaquette (2005).

2002–03 Funding Formula

(1)

£ per qualification = [(Base Rate - Achievement Funding) x Programme Weighting Factor x Disadvantage Uplift x London Weighting Factor] - Tuition + Additional Learning Support

Base Rate = Base funding for each qualification

Achievement Funding = Deduction valued at 10% of the base rate if the student fails

Programme Weighting Factor = Higher weighting for more costly programs. (A=1, B= 1.12, C= 1.3, D=1.6, E= 1.72, Adult Basic Education = 1.4)

Disadvantage Uplift = Additional funding to reflect that some students require more resources than others (Postcode disadvantage uplift = 1.1 (on average), Homeless students disadvantage uplift = 1.12, All others = 1.1)

London Weighting Factor = Additional funding to account for higher cost of provision in London (Central London = 1.18, Inner London = 1.12, Outer London = 1.06).

Tuition = 25% of Base Rate. If the student is not eligible for tuition remission, then government funding is reduced by 25% of the base rate, and the student pays tuition directly to the college. If the student is eligible for tuition remission, then the government does not subtract tuition from college funding.

Additional Learning Support = Additional funding for students with special learning needs. Value depends on needs of individual student.

Source: Learning & Skills Council (2002).

Base rate. The base-rate is the core amount of funding for each qualification. This amount is predominantly determined by the number of guided learning hours (instructional hours) for that qualification.⁷ 90% of base-rate funding is dependent on retention and 10% is dependent on student success. The academic year is divided into three funding periods and an institution receives retention funding for a qualification only if the student is present on the census date for that period. For example, imagine a student enrolled in a qualification that begins in September and ends in July. If that student drops out on December 15th (which is after the first census date but before the second census date) then the institution only receives 30% of base rate funding. Utilizing the quasi-market framework, the funding formula forces these public providers to focus their resources on student retention and achievement as opposed to initial enrollment.

Achievement funding. Student success is valued at 10% of base-rate funding. For example, in 2002–03 a qualification listed as having 440 guided learning hours had a base rate of £1,594 (Learning & Skills Council, 2002). If the student successfully completes the qualification, then the institution receives the full £1,594 base-rate funding. If the student is present throughout the qualification, but does not pass examination, then the institution receives 90% of base-rate funding [$(£1,594 - 10\% * £1,594 = £1,435)$]. Before the 2002–03 academic year achievement funding fell into three categories: qualifications deemed relevant to the needs of the economy received achievement funding equivalent to 7% of total funding, other qualifications received 5% achievement funding, and certain qualifications (such as those not externally assessed) received no achievement funding (Further Education Funding Council, 1999b) (Further Education Funding Council, 2000, 2001). Beginning in the 2002–03 academic year all qualifications received 10% achievement funding. This represents a shift in funding emphasis toward student success and, in theory, gives colleges a stronger financial incentive to ensure their students are successful.⁸

Program weighting factor (PWF). Program weighting factors are another component of the funding formula in equation (1) above. These weighting factors give higher funding for provision that is deemed more costly. Table 2 below shows the different weighting factors. Providing medical technician training, for example, is more costly than teaching history and thus funding for students enrolled in these qualifications has a higher weighting factor.

The goal of weighting factors is to eliminate the disincentive against providing costly provision. The funding formula presented in equation (1) shows that higher weighting factors are multiplied through achievement funding, which can lead to dramatic increases in total funding (Jaquette, 2005). Prior to the 2002–03 this was not the case; two qualifications with different weighting factors but the same instructional hours received the same achievement funding. Therefore, starting in 2002–03 institutions received a greater financial incentive increase success rates for qualifications that had higher weighting factors.

⁷ Base-rate funding for certain qualifications is listed explicitly as opposed to being determined by the number of guided learning hours. However, these amounts of base-rate funding for these listed courses do not differ greatly from the amount of funding they would receive had base-rate funding been determined by guided learning hours.

⁸ Most qualifications consist of only a single component, but colleges can receive partial achievement funding when a single qualification has multiple components. For example, if a student enrolled in an Advanced Vocational Certificate of Education—one of England’s longer qualifications—successfully completes three out of the five modules, the college would receive three-fifths of the achievement funding. In the 2002–03 academic year, just 1.5% of the qualifications received partial achievement funding. An analogous program in the United States would pay achievement funding for each individual course a student successfully completed.

Table 2.

Program Weighting Factors

Factor	Weight	Example
A	1	Accounting, history, economics, psychology
B	1.12	Information technology, teacher training, dance, pharmacology, chemistry
C	1.3	Hair styling, photography, catering, interior design, metallurgy
D	1.6	Music technology, food preparation, animal care, engineering
E	1.72	Gardening, fish production
Adult Basic Education (ABE)	1.4	Adult literacy, numeracy

Source: Learning & Skills Council (2002).

Table 2 shows that ABE qualifications receive higher program weighting. This policy is part of the *Skills for Life* initiative, which is a massive effort to increase adult literacy and numeracy (Department for Education and Employment, 2001). The higher weighting factor for ABE contributes to the initiative by increasing the financial incentive for colleges to serve these students.⁹

Disadvantage uplift. Performance funding was simultaneously implemented with several policy efforts to increase enrollment of low-income students (Kennedy, 1997). The disadvantage uplift is one of these policies. It pays institutions premium funding for enrolling disadvantaged students. The stated goal of disadvantage uplift funding in England is “to ensure that certain learners attract a funding enhancement, which reflects their relative disadvantage and the expected additional costs incurred by institutions in attracting and retaining such learners” (Learning & Skills Council, 2002, p. 9).

The funding formula presented in equation (1) shows that disadvantage uplift funding is multiplied through achievement funding. This creates a financial incentive to increase success rates for disadvantaged students. The disadvantage uplift was introduced in the 1998–99 academic year. It was initially applied to homeless students and students living in deprived postcodes (Kennedy, 1997). Starting in the 1999–00 academic year the uplift was extended to adult basic skills students, students receiving means-tested benefits, those with mental health problems and drug dependencies, asylum seekers, refugees, ex-offenders, and others (Further Education Funding Council, 1999a) (Further Education Funding Council, 2000). Table 3 below shows that over time the average monetary value of the uplift increased as did the percentage of students receiving the uplift.

⁹ Adult basic education *students* have been defined as those who are “undertaking programmes where the primary learning goal is adult basic education or English for speakers of other languages” (Learning & Skills Council, 2002). *ABE qualifications* refers to coursework in literacy, numeracy, access to further education, courses for students with learning disabilities, and other basic education. Therefore, ABE students are those whose primary learning goal is ABE/ESOL, but they may take non-ABE qualifications in addition to ABE qualifications.

Table 3

Disadvantage Uplift Mechanisms and Consequences, 1998–99—2002–03

Effects	1998–99	1999–00	2000–01	2001–02	2002–03
Value of disadvantage uplift by student type ^a					
Postcode disadvantage uplift (average value)	1.06	1.06	1.08	1.1	1.1
Homeless and residential care disadvantage uplift	1.09	1.09	1.12	1.12	1.12
All others ^a	NA	1.06	1.08	1.1	1.1
Percentage of students receiving disadvantage uplift by student type ^b					
Postcode disadvantage uplift	29.2	26.9	26.7	26.1	29.1
Any disadvantage uplift (including postcode)	29.2	37.0	38.8	39.1	41.7

Source: Jaquette (2005).

^a The following groups of students became qualified for a disadvantage uplift beginning in the 1999–00 academic year: adult basic skills students, those receiving means-tested benefits, those with mental health problems, those recovering from alcohol or drug dependencies, political asylum seekers, political refugees, ex-convicts, those whose statutory education has been interrupted, those in or who have recently left mental or physical healthcare, those taking care of children/relatives as a full-time job.

^b The percentage of students receiving a disadvantage uplift was calculated using a sub-sample of the further education population. This sub-sample is defined in the quantitative modeling section to follow.

Additional learning support. Additional learning support (ALS)—another component of the funding formula—is funding for special support in addition to what is normally provided in a standard learning program (Further Education Funding Council, 2000). ALS funding facilitates the employment of specialist staff including additional teachers to reduce class size (used especially in basic skills), personal care assistants, mobility assistants, readers, note-takers, and educational psychologists (Further Education Funding Council, 2001). The most common types of students utilizing ALS were basic skills students and those with sensory impairment, dyslexia, learning difficulties, or physical impairment (Faraday, Fletcher, & Gidney, 2000).

ALS has existed since 1993. Two evaluations of ALS have stated that the program is very popular amongst providers because there is no limit to the amount of ALS funding an institution may receive for serving a single student and because ALS is funded on an uncapped, per-pupil basis by the central funding agency rather than by operating revenue of individual colleges (Faraday & Fletcher, 2003; Faraday et al., 2000). If, instead, each college was given a lump sum of ALS funding for all students, this could create a disincentive for enrolling students with costly support needs.

In the 2002–03 academic year 9.3% of the population analyzed in this study received additional learning support. The average amount of ALS funding for each qualification receiving ALS (note that a single student can be enrolled in more than one qualification) was equivalent to \$1080 using a January 2003 exchange rate (Jaquette, 2005). Logistic regression modeling, presented below, shows that the presence of ALS had a significant positive effect on the likelihood of student success, especially for disabled students and basic skills students (Jaquette, 2005).

Tuition remission. Tuition fees are the final component of the funding formula. Generally, students are expected to pay their colleges a tuition fee equal to 25% of the national base rate for their qualification. Referring to the funding formula above, any tuition fees paid to the institution by

the student is deducted from the amount the central funding agency pays to the college. However, many students are eligible for tuition remission. If the student is eligible for tuition remission, the central funding agency does not deduct the tuition fee from the amount it pays the college. In the five years of data analyzed in this study, 29% of students paid full tuition fees. The rest were either eligible for tuition remission or the individual college decided to reduce or waive tuition costs as part of their internal policy. In this latter case, the institution does not receive tuition fees from either the student or the central funding agency.

Regulating Further Education

The potential unintended consequences of performance funding include lowering academic standards, restricting open access, and focusing resources only on the measurable outcomes which are subject to performance funding. Performance funding policies implemented in isolation of countervailing policies and institutions are more likely to exhibit these unintended consequences.

In England several semi-autonomous government agencies help reduce these unintended side-effects and also put pressure on institutions to improve performance. This section discusses three important regulatory agencies in English further education, all of which are funded by and accountable to the Department for Education and Skills (DfES).

The Learning and Skills Council. The Learning and Skills Council (LSC) is in charge of funding and planning further education, which includes administering the funding formula described above. The LSC was created under the Labour Government by the Learning and Skills Act of 2000 (Department for Education and Employment, 1999). The predecessor to the LSC was the Further Education Funding Council (FEFC), which was created by the Conservative government in the wake of 1992 Incorporation Reform. There are important differences between these two organizations. First, while FEFC was responsible only for further education, the LSC expanded its policymaking remit to include work-based learning providers and adult community education learning providers as well. Second, while FEFC was responsible for inspection, LSC lost this inspection responsibility because the DfES wanted an arms-length relationship between funding and inspection.

Third, under the FEFC enrollment growth was encouraged by market mechanisms. The entry funding element of the FEFC funding formula created a “grow or die” mentality for colleges leading to dubious recruitment practices (Ball, Maguire, & Macrae, 2000; Rospigliosi, 2000). When the Labour government came to power in 1997 market incentives for growth were reduced. The LSC funding formula introduced in 2002–03 eliminated entry funding and LSC satellite offices took a stronger role in planning enrollment growth at the local level. This exemplifies the shift away from free market policies and towards centralized planning. Therefore, LSC has a planning remit that the FEFC lacked.

Inspection agencies. Inspection is seen by many to be the most influential regulatory force in English further education (G. Pine, personal communication, August 5, 2005). The Adult Learning Inspectorate and the Office for Standards in Education are jointly responsible for inspecting colleges. Inspection of colleges is guided by seven core questions, three of which relate directly to student success. Each college was inspected once between April 2001 and summer 2005 (Office for Standards in Education & Adult Learning Inspectorate, 2001).

Inspection teams grade soft outcomes and processes to guard against the unintended consequence of colleges focusing resources only on performance funding measures. These include quality of instruction, student engagement, quality of their guidance counseling and tutoring services, fulfillment of equal-opportunity responsibilities, etc (Learning & Skills Development Agency, 2003;

Office for Standards in Education, 2002) Additionally, inspection teams review a sample of individual learning plans which colleges are required to create for each student (Learning & Skills Development Agency, 2003).

Inspections have sharp teeth. Poor inspection grades for a particular program area can lead to a freeze in enrolment, the closing of that program area, and even closure of the institution. When college programs or services are deemed in need of improvement, they must develop action plans and report on their progress (Office for Standards in Education, 2002).

Inspection is also a strategic mechanism used to increase student success. High or improving success rates are prerequisite for good inspection grades. Results of inspections are posted on the Office for Standards in Education website.¹⁰ This public report on performance creates an incentive for institutions to increase success rates in order to maximize institutional prestige. Additionally, several college principals have been fired by their local board of governors because of poor inspection results, which are largely dependent on improving success rates (G. Pine, personal communication, August 5, 2005).

Qualifications and Curriculum Authority. The Qualifications and Curriculum Authority is a regulatory agency that “maintains and develops the national curriculum... and accredits [externally assesses] and monitors qualifications in colleges and at work” (Qualifications and Curriculum Authority, 2005).¹¹ This study is primarily concerned with the external assessment role; exams and projects are sent to third-party graders who determine whether students pass the qualification and the grade that students receive. The guiding principle behind external assessment is that when institutions face strong pressure to increase student success, they should not determine what constitutes success. In the absence of external assessment colleges would have a strong incentive to lower academic standards in order to increase success rates. Therefore, external assessment helps ensure that gains in student success rates are not due to declining academic standards.

Summary

This section sought to address the first research question: how has the structure of funding policy and regulatory control created incentives and mechanisms to increase student success? Analysis of the per-pupil funding formula showed that institutions had a strong financial incentive to ensure their students were successful. In absence of other measures this could lead some colleges to restrict enrollment to students that had a high likelihood of success. However, the funding formula contained other components—specifically the disadvantage uplift and additional learning support—which mediated against such enrollment restriction. Regulatory agencies were also shown to play a key role in reducing unintended consequences and catalyzing improvements in student success. The Department of Education and Skills controls the strategic goals of these agencies to ensure they compliment one another. In the next section I analyze five years of student level data to see whether funding policy and regulatory control was actually successful in raising student success rates.

¹⁰ This website has inspection reports for all FE colleges available at <http://www.ofsted.gov.uk/reports/index.cfm?fuseaction=listColleges&type=fecollege>.

¹¹ In England the process of using third-party graders to assess student work is *external accreditation*. In this article I have replaced the term external accreditation with external assessment. The rationale for this action is to reduce confusion for readers because in the U.S. the term accreditation refers to peer-evaluation of entire institutions, as opposed to external assessment of student work.

Descriptive Statistics and Modeling

This section uses five years of student level administrative data to gain insight on the second research question: What has been the impact of funding and regulatory control on student success? A description of the data will be followed by analysis of descriptive statistics and regression modeling. Unfortunately, these analyses using data from 1998–99 to 2002–03 cannot fully answer the second research question because the data years analyzed postdate the dramatic policy reforms implemented beginning in 1993. Additionally, incremental changes in funding policy and regulation have often been implemented simultaneously with changes in the national curriculum, changes in teacher training, etc. which lie outside the already wide scope of this research. However, these are shortcomings which plague most analyses that are not experimental in nature.

There is another reason to be cautious results which attempt to isolate the effect of specific funding policies on student success; these policies are intended to work in concert rather than isolation from one another. Disadvantage uplift funding and additional learning support funding are intended to offset the additional financial burden of helping disadvantaged students become successful. The grading system used by the inspection regime is intended to give colleges the incentive to focus resources on increasing student success. Indeed, a major criticism of performance accountability efforts in U.S. states is that they tend to be tacked on to existing systems without thought to how policies reinforce or conflict with one another. Therefore, when thinking about what drives trends in success rates, readers are encouraged to think holistically about the incentives and checks and balances created by the entire funding and regulatory system.

Data and Sample

The following analyses are based on student level administrative data from 1998–99 to 2002–03 academic years for the entire population of further education students. The data have never before been used in academic research. Further education reform in 1992 mandated that all colleges return data for all students. The resulting dataset is called the Individualized Learner Record (ILR), which is similar to student data tracking systems which exist in most U.S. states. The data is qualification level data rather than student level data because an individual enrolled in three qualifications would have three observations in the ILR.

Several additional datasets were merged with the ILR. First, institution level data was retrieved from an LSC administrative dataset. Secondly, ILR data was merged with data from the Learning Aim Database¹² to get qualification level variables, including the program weighting factor. Third, data on local area population density and local area educational attainment were retrieved from the 2001 UK census. Finally, the English Indices of Deprivation 2004 were merged to the ILR by student postcode. These indices combine seven measures of deprivation (income deprivation,

¹² The Learning Aim Database provides information on qualifications and learning aims for institutions. The software provided by the Learning Aim Database is used by colleges to determine how much funding they will receive for each qualification. The Learning Aim Database Website is <http://providers.lsc.gov.uk/lad/default.asp>

crime deprivation, housing deprivation) into a single index, which shows how deprived a local area is.¹³

Variables were chosen for the following analysis based on a literature review of factors that influence adult student success rates (Alfonso, Bailey, & Scott, 2005; Bailey et al., 2004; Davies, 2001; Davies & Rudden, 2000; Grubb & Lazerson, 2004; Martinez, 2001; St. John, 1999). These factors were divided into individual demographic determinants (such as ethnicity, gender), qualification level determinants (such as difficulty level, mode of instruction), institution level characteristics (such as number of students, and population density of college geographic area), and, finally, funding determinants (Jaquette, 2005). These funding determinants were based on the above analysis of funding policy, and are the main determinants of interest. Unfortunately, key variables such as previous educational attainment, parental income, and parental education were not present in the ILR.

The population was restricted to one that would be most comparable to American community colleges. The sample kept students from General Further Education Colleges and Tertiary Colleges, dropping sixth-form colleges (which educate 16–18 year olds), specialist colleges (for example horticulture, or drama colleges), external providers, and work-based learning providers (apprenticeships). This analysis only retained students who were 19 or older at the beginning of the academic year. Because the analysis of funding policy focused on the funding policies under the FEFC/LSC, qualifications not funded by FEFC/LSC were dropped. Qualifications in franchised provision were dropped in order to focus on a more homogenous group of providers.¹⁴ Additionally the sample only kept students on courses of 20 or more guided learning hours. The rationale was to exclude “taster courses” and other courses that would be expected to have high success rates due to their short duration.

The data was further limited to qualifications where student success was known. Observations were deleted if the qualification was continuing to the next academic year, if the exam results were unknown, or if the students were *partially successful*. To illustrate, in the 2002–03 ILR data student success was known for 86.5% of qualifications. This 86.5% would be kept in the sample. Of the remaining 13.5%, 1.5% had partial achievement, 2.5% exam not taken/result not known, and 9.5% qualification continuing to the next academic year. There was right censoring, but not left censoring; a student who started a two-year course in year X-1 would be dropped from the data in year X-1, but would appear in year X when their outcome was known. This ensures that there is no duplication of student qualifications from one year to the next.

Observations in the analysis dataset have three possible outcomes: first, they withdrew from the course; second, they were present throughout the duration of the qualification (this is called retention), but failed to pass examination; third, they were present throughout the qualification, and

¹³ The 2004 Indices of Deprivation were commissioned by the Office of the Deputy Prime Minister to the Social Disadvantage Research Centre at the Department of Social Policy and Social Work at Oxford University. The Indices of Deprivation are based on the idea that distinct measures of deprivation can be measured at the output area level and aggregated into an index that measures the total amount of deprivation experienced by individuals living in a particular super output area. Each super output area has about 1,500 people. The seven domains of deprivation are: income deprivation; employment deprivation; health and disability deprivation; education, skills and training deprivation; barriers to housing and services, living environment deprivation, and crime deprivation. These indices are different from the ones which are used to determine whether students receive a postcode disadvantage uplift.

¹⁴ Franchised provision is when an institution contracts an external provider to provide instruction on behalf of the institution.

they successfully passed examination. The analyses presented here only consider the binary outcome called success, where 0 = withdrawn or failed examination, 1 = passed examination. Analyses of student retention can be found in Jaquette (2005) .

Descriptive Statistics

Table 4 on the next page shows success rates for the overall population and for sub-groups from the 1998–99 to 2002–03 academic year. In the appendix, Table A-1 shows the corresponding sample sizes. Overall success rates increased by 10% over this time period and the gains were distributed fairly equally over time, growing by 2.8%, 2.3%, 2.2% and 2.7% in each respective year.

Subgroup analysis shows which groups made the strongest gains. The local level of deprivation is analyzed first. A higher deprivation score means that the student comes from a more deprived postcode. Looking down the columns, less deprived areas are always associated with higher success rates, but looking across the rows the biggest gains over time were made by students in highly deprived areas. This result suggests that the achievement gap between affluent and deprived areas is decreasing over time.

Looking next at ethnicity, 2002–03 non-whites made up 26% of the sample as compared to 22% in 1998–99.¹⁵ White and Indian students generally have the highest success rates. The overall picture is that gains were strong for all ethnic groups, with the white vs. non-white achievement gap closing over time, from 7% in 1998–99 to 5% in 2002–03.¹⁶ It is important to note that non-whites are making these gains despite residing in more highly deprived areas. For example, in this study Bangladeshis had the highest average level of deprivation and their success rates increased by 20%. The findings for deprivation and ethnicity are important considering research in the United States, which indicates ethnic minorities and deprived students persistently have low and stagnant success rates (Bailey et al., 2004).

Looking next at gender, women generally have higher success rates than men. However, success rates for women have increased by 9%, while success rates for men have increased by 12%. Looking next at age, older students have higher success rates and stronger gains over time than younger students.

The next set of variables focus on the type of qualification a student enrolls in (a single student can enroll in multiple qualifications). The variable qualification level is a measure of course difficulty as determined by the Qualification and Curriculum Authority.¹⁷ The gains are strongest for “other” and level 1, which are generally low level qualifications.¹⁸

¹⁵ Author’s calculation.

¹⁶ Author’s calculation.

¹⁷ Note that we cannot make a valid comparison to the 2002–03 data because the level assigned to some courses was changed as part of the transition towards a national qualification framework.

¹⁸ Other qualification variables, such as area of learning (i.e. science, business, construction, etc) and qualification type (i.e. A-level, NVQ, GNVQ, etc) are included in Jaquette (2005). Critics have state that the rise in success rates is due to declining rigor in new curriculum. Jaquette (2005) devotes considerable attention to this assertion but finds that this is not the case.

Table 4
Qualification Success Rates, 1998–99 to 2002–03

Population	1998–99	1999–00	2000–01	2001–02	2002–03
Overall	56.9	59.7	62.0	64.2	66.9
Deprivation Index					
Deprivation LT 10	60.9	62.6	64.4	66.8	69.4
Deprivation 10–<20	59.5	61.8	63.9	65.9	68.7
Deprivation 20–<30	56.6	59.4	61.7	63.7	66.7
Deprivation 35–<50	52.9	56.8	59.4	61.5	64.5
Deprivation 50+	49.4	54.2	57.6	60.1	62.9
Ethnicity					
Bangladeshi	46.6	51.5	57.2	61.1	67.0
Black-African	44.4	51.8	53.7	56.9	59.5
Black-Caribbean	46.3	50.3	53.1	56.3	57.5
Black-Other	45.2	48.3	51.7	55.2	56.8
Chinese	52.2	56.4	59.5	63.1	67.9
Indian	55.5	59.0	60.4	64.5	68.3
Pakistani	48.9	52.0	50.3	58.1	60.8
White	58.4	61.1	63.0	65.7	68.3
Asian-Other	51.3	55.7	58.8	61.4	62.3
Gender					
Male	53.0	56.4	59.4	61.8	64.6
Female	59.3	61.7	63.5	65.7	68.4
Age					
Age 19–25	52.1	54.7	55.4	57.1	60.2
Age 26–34	56.8	59.9	62.4	64.6	66.3
Age 35–44	60.8	63.4	65.9	67.7	69.6
Age 45–54	59.7	62.1	65.2	67.2	70.5
Age 55+	54.8	57.9	61.5	65.5	70.9
Disabled	56.6	62.1	63.3	65.5	70.1
Qualification level ^a					
Entry & level 1	55.7	59.1	60.7	64.0	68.5
Level 2	55.2	58.1	59.7	61.3	62.6
Level 3	55.1	57.8	60.6	62.6	64.5
Level 4 or Higher	54.3	50.2	51.3	54.7	60.3
Other	61.9	68.9	71.7	71.7	76.9
External assessment					
Not externally assessed	60.0	65.9	71.0	74.3	75.9
Externally assessed	56.1	59.0	60.8	62.0	63.9
Qualification duration					
LT 24 Weeks	66.0	67.0	70.2	73.6	74.9
24–<48 Weeks	53.8	57.6	58.1	59.5	62.1
48+ Weeks	46.6	47.8	52.0	50.4	56.5
Mode of attendance					
Full-time, full-year	56.7	59.9	57.2	58.0	62.2
Full-time, part-year	66.2	69.6	71.9	74.8	75.5
Part-time	56.3	58.9	62.3	64.6	67.3

Population	1998–99	1999–00	2000–01	2001–02	2002–03
Open/distance learning	44.1	47.8	50.8	47.3	52.0
Funding Determinants					
Receive access funding			57.2	59.1	65.0
Postcode disadvantage uplift	52.0	55.6	58.4	60.4	63.7
On benefit	50.1	53.1	55.2	58.2	60.3
ABE student	55.8	64.4	70.0	73.1	72.8
Asylum seeker	47.8	51.1	59.1	58.4	57.5
Additional Learning Support	61.4	65.6	66.3	69.3	73.8
N	1,509,393	1,687,464	1,692,394	1,646,138	1,771,842

^a Percentages for 2002–03 not comparable to previous years due to change in definitions.

External assessment has special theoretical importance to this research; when institutions face such strong pressure to increase success rates, the cheapest solution is to institute more lenient grading policies. However, colleges do not have this power when standards are controlled by the national curriculum authority and student success rates are determined by external graders. Generally, about 80% of qualifications analyzed in this study were externally assessed. Over the five year period success rate gains for non-externally assessed qualifications were 16% compared to 8% for externally assessed qualifications. Therefore, non-externally assessed qualifications have higher success rates and make stronger gains over time, but are not the driving force in overall success rate gains because they represent a minority of the population.

The final set of variables in table 4 focuses on qualifications which were subject to additional funding initiatives. Most of these funding initiatives—whether they were aimed at the college or directly to the student—focused on students who historically have had low success rates. Access Funding is given directly to students who are low income or in receipt of means tested benefit and can be used to offset the childcare costs, transportation costs, books and equipment, and examination fees. In theory, such programs help adult students balance work, family obligations, and education (Grubb & Lazerson, 2004). Access funding was not implemented nationally until the 2000–01 academic year. Success rates for students receiving access funding grew 8% over the three years of data.¹⁹

The postcode disadvantage uplift is a disadvantage uplift for students who live in a deprived postcode. Between the academic years 1998–99 and 2002–03 success rates for students receiving a disadvantage-postcode uplift increased by 11.7% compared to 10% for the national average. This finding may be especially important for policymakers. Research on Community colleges has found it is difficult to increase success rates for disadvantaged students (Bailey, Calcagno, Jenkins, Kienzl, & Leinbach, 2005; Grubb & Lazerson, 2004). Further education colleges, however, are given a dual financial incentive to serve these students and ensure that they are successful. The value of the disadvantage uplift increased from an average of 6% of total funding in 1998–99 to 8% in 2000–01 to 10% in 2002–03. Furthermore, as explained in the previous section, the total value uplift funding is increased when students are successful.

¹⁹ In analysis restricted to students receiving means tested benefits, those receiving access funding had higher success rates than those not receiving access funding (Jaquette, 2005). Therefore, when restricting analysis to students which are—theoretically—eligible for access funding, those that actually receive access funding have higher success rates.

Students receiving means tested benefits and political asylum seekers have been eligible for fee remission—a funding policy directed at the student—in all years studied. Beginning in 1998–99 both groups began receiving disadvantage uplift funding at 6% of total funding. This amount rose to 8% in 2000–01, and to 10% in 2002–03. Therefore, these students receive direct financial support (no-tuition), and in addition institutions are paid more money for serving these students. Although the success rates remain below the national average, both groups showed gains of 10% which is significant considering the special challenges facing these disadvantaged students.

ABE students have benefited from a number of financial incentives aimed at both students and providers. To summarize, they received tuition remission since 1998–99,²⁰ beginning in 1999–00 they became eligible for a disadvantaged uplift, and beginning in 2002–03 ABE qualifications received a higher program weighting. ABE students were also eligible to receive additional learning support. Over the five years studied success rates for ABE students increased by 17%.

Finally, students receiving Additional Learning Support (ALS) have much higher success rates than those not receiving ALS. ALS students also make stronger gains over time. Further subgroup analysis shows that this result is partly explained by the fact that ALS students are more likely to be enrolled in non-externally assessed qualifications (Jaquette, 2005). However, even after controlling for external assessment, ALS is strongly associated with higher success rates as shown in the following regression results.

Simulating the funding formula. The per-pupil funding formula was simulated by combining student level data from the Individualized Learner Record with the rules from funding policy documents (Further Education Funding Council, 1999b, 2000, 2001; Learning & Skills Council, 2002).²¹ Figure 1 below shows funding per instructional hour for select student groups from 1998–99 to 2002–03 using constant 2002 £ converted using average 2002 exchange rate. Because this research focused on incentives created by funding policy, Figure 1 shows how much money institutions receive for each student if the student is successful.

Figure 1 yields several important results. First, average funding for all students rose steadily from \$8.7 per instructional hour in the 1998–99 academic year to \$10.4 per instructional hour in 2002–03. Second, colleges receive more funding for students with higher resource needs. Students receiving a disadvantage uplift are funded 7% higher on average than those that do not receive a disadvantage uplift. ABE students are funded 30% more on average than non-ABE students.²² Students receiving additional learning support receive nearly twice the funding on average as compared to those that do not receive additional learning support. Funding per instructional hour for ABE students receiving additional learning support (not shown) and disabled students receiving additional learning support (not shown) is even higher. In conclusion, the per-pupil funding formula

²⁰ Tuition remission was the ILR variable used to identify basic skills learners.

²¹ Details on the construction of the simulation can be found in the appendix of the full report (Jaquette, 2005).

²² It may appear contradictory that funding for ABE students fell in 2002–03, the same year that the Skills for Life initiative came into effect. The reason for this is as follows: the new funding formula which came into effect in 2002–03 assigned a program weighting factor of 1.4 for ABE students. This weighting factor was only applied to ABE qualifications that followed the new ABE national curriculum which came into effect in 2002–03 (Department for Education and Skills, 2003b). However, colleges were considerably confused about this policy and only a minority of ABE students were actually enrolled in qualifications that met the new national curriculum (Learning & Skills Council, 2003).

which emphasizes student success, allocates additional funding for students that need more resources to become successful.

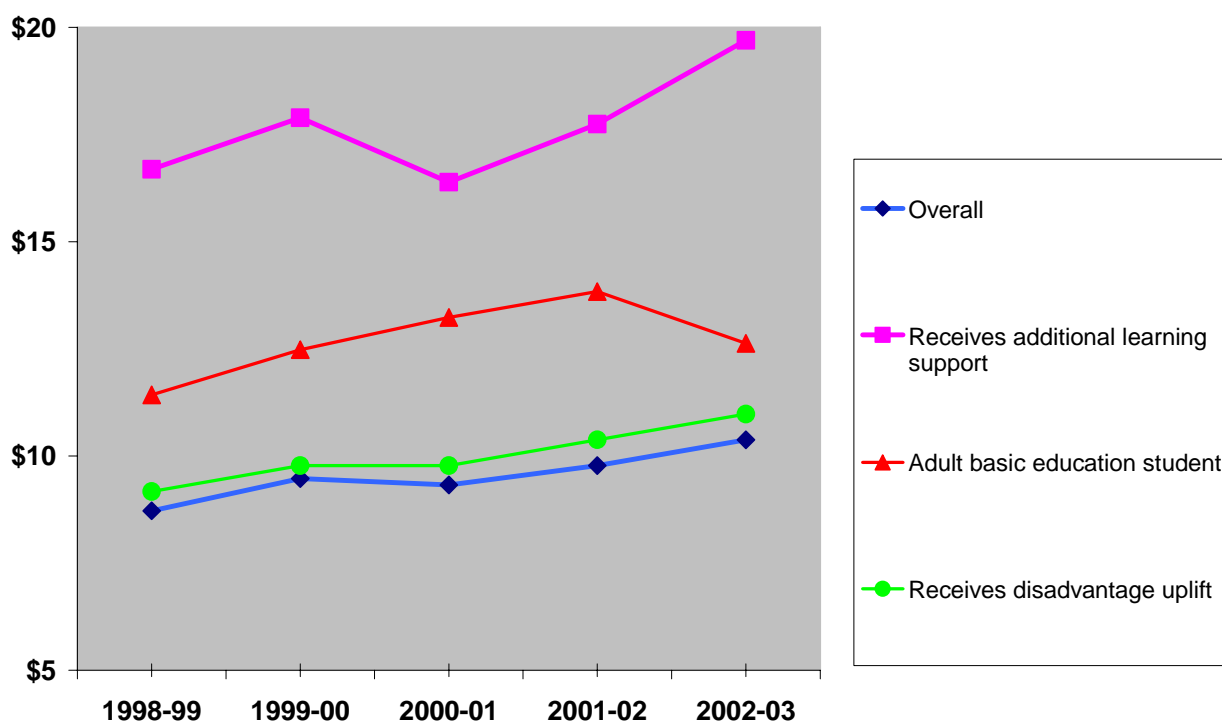


Figure 1. Funding per instructional hour, 1998–99 to 2002–03, using constant 2002 £ converted using average 2002 exchange rate

Statistical Modeling

The preceding trends in success rates by subgroup are partially driven by their correlation with particular variables. Modeling helps control for the effect of other variables. The analyses presented below utilize logistic regression modeling. The model was built in stages, adding student-level socioeconomic determinants first, followed by qualification-level determinants, institution-level determinants, and finally funding-determinants. Table 5 below shows selected variables from the final model in which all variables were included. Due to space constraints, results of following variables appear in Table A-2 (in the appendix): geographic region, area of learning, qualification type, institution size, population density, and program weighting. The results for all models are shown in the appendices of Jaquette (2005) which can be obtained by the author upon request.

Table 5 shows odds ratios and *p*-values for selected variables. The odds ratios show the odds of success compared to that of the reference group, controlling for other factors. An odds ratio greater than one means that group is more likely to be successful than the reference group, while an odds ratio of less than one means that group is less likely to be successful than the reference group. *P*-values are measures of statistical significance. With sample sizes so large, most effects are highly significant. Therefore, the value of the odds ratio gives a better indication of whether one group has significantly higher or lower success rates than another.

Table 5
Odds Ratios for Student Success Logistic Regression

Variable	1998–99	1999–00	2000–01	2001–02	2002–03
Deprivation index (ref= LT 10)					
Deprivation 10-<20	0.96***	0.95***	0.94***	0.94***	0.94***
Deprivation 20-<30	0.90***	0.88***	0.86***	0.88***	0.89***
Deprivation 30-<50	0.82***	0.81***	0.78***	0.81***	0.82***
Deprivation 50+	0.71***	0.73***	0.71***	0.75***	0.77***
Female	1.25***	1.20***	1.20***	1.18***	1.21***
Disabled	0.93***	0.98	0.93***	0.89***	0.97***
Ethnicity (ref= white)					
Asian-other	0.81***	0.82***	0.80***	0.81***	0.77***
Bangladeshi	0.81***	0.75***	0.80***	0.83***	0.92***
Black-African	0.74***	0.82***	0.76***	0.76***	0.74***
Black-Caribbean	0.72***	0.76***	0.76***	0.76***	0.71***
Black-other	0.71***	0.73***	0.75***	0.75***	0.69***
Chinese	0.79***	0.79***	0.82***	0.83***	0.87***
Indian	0.90***	0.90***	0.91***	0.95***	1.00
Pakistani	0.76***	0.74***	0.64***	0.77***	0.81***
Age (ref= 19–25)					
Age 26–34	1.17***	1.20***	1.25***	1.28***	1.26***
Age 35–44	1.28***	1.32***	1.39***	1.44***	1.44***
Age 45–54	1.17***	1.21***	1.30***	1.38***	1.45***
Age 55+	0.93***	1.05***	1.13***	1.27***	1.43***
Qualification level ^a (ref= level 1)					
Level 2	1.09***	1.02***	0.96***	0.96***	0.91***
Level 3	1.18***	1.20***	1.15***	1.09***	1.00
Level 4 & 5	1.07***	0.80***	0.75***	0.78***	0.86***
Other Level	1.49***	1.48***	1.37***	0.92***	1.47***
Externally assessed	0.82***	0.88***	0.92***	0.68***	0.70***
Mode of Attendance (ref= full-time full-year)					
Full-time Part-year	1.06***	1.14***	1.32***	1.47***	1.29***
Part-time	0.82***	0.83***	0.99	1.06***	0.96***
Qualification duration (ref= LT 24 weeks)					
24-<48 Weeks	0.67***	0.71***	0.63***	0.56***	0.61***
48+ Weeks	0.51***	0.47***	0.47***	0.38***	0.47***
Open/Distance Education	0.64***	0.79***	0.65***	0.50***	0.55***
Funding Determinants					
Postcode disadvantage uplift	0.99	0.99	1.00	0.97***	0.98***
Additional learning support	1.31***	1.26***	1.24***	1.43***	1.52***
Access funding			1.00	0.98	1.13***
Means tested benefit	0.69***	0.71***	0.75***	0.80***	0.73***
ABE students	0.81***	0.91***	1.08***	1.08***	1.16***
Asylum seeker	0.85***	0.71***	0.90***	0.82***	0.80***
N	1,244,985	1,608,931	1,622,600	1,629,278	1,771,656
Pseudo R ²	.09	.079	.084	.104	.096
Number of Parameters	74	74	75	75	75

Table 5 notes:

Results for geographic region, area of learning, qualification type, institution size, population density, and program weighting not shown. See Table A-2 in appendix for full model.

^a Percentages for 2002–03 not comparable to previous years due to change in definitions for how qualification level was defined.

^b The reference group for each funding determinant is qualifications not having that characteristic. For example, the odds ratio for Additional Learning Support shows the regression adjusted odds of success in comparison to qualifications that do not receive Additional Learning Support.

^c The access funding program did not begin until the 2000–01 academic year

* $p < .01$, ** $p < .001$, *** $p < .0001$

Regression models were run separately for each academic year. Therefore, year to year comparisons should be made with caution. Recall that success rates increased by 10% over the five year period. If the odds ratio for a particular subgroup remains the same from year to year, it does not mean that the odds of success for that subgroup did not change from the previous year. Rather, it means that compared to the reference group, the subgroup has the same likelihood of success compared to the reference group as it did in the previous year. Comparing odds ratios over time for a particular row can, however, show how success rates for that group changed over time compared to the reference group. If a particular subgroup consistently had an odds ratio of .8, this means that their odds of success are lower than the reference group but that their gains in success rates are keeping pace with that of the reference group.

Regression results in Table 5 show findings similar to the descriptive statistics. First, for level of deprivation, the odds ratios are all lower than one. This makes intuitive sense; it means that, after controlling for other factors, success rates are higher for the lowest deprivation band, which is the reference group. However, the odds ratios for the high deprivation groups get larger in each year, meaning that, controlling for other variables, success rates for more deprived students are catching up to success rates for less deprived students. The same can be said about ethnic minorities in comparison to white students, which are the reference group; despite having lower success rates in each year (exhibited by odds ratios less than one), odds ratios for ethnic minorities generally grow higher each year.

There are several notable differences between the descriptive statistics and the regression results. When the model is run without qualification level variables (not shown), the odds ratios for high deprivation bands increase, which shows that these students are disproportionately enrolled in low-level qualifications which have higher success rates for all students (Jaquette, 2005). This line of thinking can be employed to explain the results for other sub-groups; Bangladeshis have higher odds ratios than whites (reference group) when only socioeconomic variables such as deprivation are included. This is because Bangladeshis are disproportionately living in high deprivation areas, a characteristic correlated with low success rates. However, the odds ratios for Bangladeshis decline once qualification level variables are added because Bangladeshis are disproportionately enrolled in entry level qualifications which have high success rates for all students. Such analysis shows the value of statistical modeling over descriptive statistics.

Moving to age, even after controlling for other variables, such as difficulty level and qualification duration, older students have much higher success rates than younger ones. Additionally, longer course duration and open/distance education are both associated with lower success rates. As predicted in the analysis of funding policy, qualifications that were externally assessed had lower rates of success than non-externally assessed qualifications. The strength of this trend increased over time.

Externally assessed qualifications much lower odds of success than externally non-externally assessed qualifications. These findings support the statement that funding for achievement can lead to a decline in academic standards. At the same time, this decline is not inevitable. External assessment precludes this possibility.

This study is centrally concerned with funding determinants which are shown at the bottom of Table 5. Here, results for the individual components of the funding formula are shown, because it proved difficult to model the entire funding formula in any meaningful way. Institutions received financial rewards (described above) for increasing the success rates of students on means tested benefits, asylum seekers, and students receiving a postcode disadvantage uplift. Despite having odds ratios less than one, success rates for these students kept pace with the strong gains of their respective reference groups.²³

Success rates for ABE students increased over time, and were especially strong in 2002–03 with an odds ratio of 1.16. This means that ABE students made strong gains in comparison to non-ABE students, who were the reference group. This is an important finding considering the number of funding initiatives which have been aimed at ABE students. The positive results for ABE students are stronger (1.24 odds ratio in 2002–03) when external assessment is not included in the model (model not shown). This is because ABE students were disproportionately enrolled in non-externally assessed qualifications.

The results for students receiving Additional Learning Support (ALS) are even stronger. ALS has a large, positive impact on the odds of success, and this effect has grown over time. For example in 2002–03 students receiving ALS were 1.52 times more likely to be successful than those not receiving ALS. When external assessment is not included in the model, the odds ratio rises slightly to 1.55. The results for ABE students and ALS students are positive from a policy perspective. They suggest that financial policies targeted at institutions can help increase student success rates.

Conclusion: Policy Learning for U.S. Community Colleges?

To summarize, overall success rates for the population analyzed rose by 10% over a five year period. Gains were especially strong for ABE students, disadvantaged students, and those in need of additional learning support. How was this achieved? This study has focused on the role of funding policy and regulatory control. 1992 Incorporation Reform created a quasi-market in further education. Utilizing the theoretical discussion of quasi-markets, government policy generally sought to retain public providers, but created incentives for these providers to act competitively. These colleges became responsible for their own financial solvency. Colleges were given performance funding contracts. Institutions only receive funding if they are able to attract students. If their students dropped out or were not successful, funding would decrease. Additionally, high or improving success rates were prerequisite for “good inspection grades,” which in turn determined the job security of a college’s senior management.

The quantitative analyses presented yield optimistic results. We are not powerless in the face of socioeconomic factors. The unintended consequences of performance accountability are not inevitable. External assessment can protect against declining academic standards. A disadvantage

²³ In order to check for high collinearity between “level of deprivation” and students receiving a “postcode disadvantage uplift,” an additional model (not shown) was run without “level of deprivation.” The results for this model were very similar to the model shown.

uplift can protect against the disincentive against enrolling students with higher resource needs. Inspection can protect against the incentive to focus resources only on a small number of outcomes.

However, it would be difficult to incorporate these policies to U.S. states. Five reasons are listed. First, all public funding for English further education comes from the central government, while public funding for community colleges comes from federal, state and local governments. From an organizational theory perspective, the more that organizations in a sector rely on a single funding source, the more leverage that funding source has to demand performance (DiMaggio & Powell, 1983; Scott & Meyer, 1991). The relative dilution of public funding sources for community colleges and the small amount of funding devoted to performance makes it unlikely that performance funding will be sufficient to induce behavioral change in community colleges.

Second, a fundamental priority of any organization is survival (DiMaggio & Powell, 1983). Voucher funding systems, which use the threat of market-exit as an incentive for increased efficiency, inherently increase budget instability in comparison to traditional “base + enrollment growth + inflation” funding policies. On Incorporation Day (April 1, 1993) there were 465 further education colleges but by 2003 there were only 435 colleges due to mergers and closures (Cope, Goodship, & Holloway, 2003). Such closures would not be tolerated in the U.S. because the American Association of Community Colleges is much stronger than its English counterpart, The Association of Colleges.

Third, although the equity components of the per-pupil funding formula would be supported by champions of social justice the U.S. political climate that increasingly values merit funding over need-based funding. Furthermore, need-based funding policies in the U.S. are usually eroded over time by political pressure to cater to middle-class voters, as has been the case with Federal Pell Grants (Callan, 2001) and the Georgia Hope Scholarship (Henry & Rubenstein, 2002).

Fourth, the English brand of performance funding could not be imported to the U.S. because English qualifications are generally much shorter and more discrete than U.S. degrees. Interestingly, the English system provides performance funding when students successfully pass sub-components of a single qualification (Learning & Skills Council, 2002). By contrast, U.S. performance funding entire degrees (which can take community college students upwards of six years to complete) seems ridiculous. A U.S. performance funding system analogous to the English system would provide performance funding for each individual course successfully completed, but lack of external assessment would make such a policy problematic.

Fifth, the U.S. lacks the strong regulatory agencies that underpin the English system. Perhaps the most intractable obstacle to importing English policies is the fundamental difference between the U.S. and English welfare states. England regulates further education through a sophisticated bureaucracy of state-owned regulatory agencies. The Department for Education and Skills controls overall strategy and can continually reorganize the regulatory agencies under its remit so that their individual missions balance the sector on the whole. Other areas of English social policy, such as welfare and unemployment benefits, operate similarly (Cope et al., 2003).

The U.S., by contrast, has a much smaller welfare state, and historically relies on voluntary agencies to regulate social policy. In his 19th century observations of America Alexis de Tocqueville said “Americans of all ages, all conditions, and all dispositions constantly form associations.... Wherever at the head of some new undertaking you see the government in France, or a man of rank in England, in the United States you will be sure to find an association” (Tocqueville, 1862, p. 198). Accreditation of postsecondary education institutions provides an example of one such voluntary agency. Accreditation is America’s substitute for English inspection and external assessment. However, accreditation associations are run by college and university presidents. This violates the English principle that regulation and provision should have an arms-length relationship. U.S. accreditation associations cannot be expected to hold a tough line with regard to performance

accountability standards, especially when public funding is at stake. In absence of strong state regulatory agencies, performance funding for student success is likely to decrease academic standards.

A frequent lesson from international comparative policy research is that individual social policies work because they are buoyed by a complex welfare state and social structure that has evolved over time in that particular country (Esping-Anderson, 1990). Wholesale policy borrowing rarely works. However, certain components of English policymaking may be more feasible in some states than others. Florida, for instance, has a strong regulatory environment and 69% of community college operating revenue comes from the state (Education Commission of the States, 2000), a trait that permits considerable leverage to demand performance.

Despite these heavy-handed caveats, the English story is a positive one that U.S. policymakers can learn from. First, performance accountability based is merely a means to convince colleges to focus their resources on outcomes deemed important by external stakeholders. Performance accountability policies are typically unsuccessful when colleges are coerced into compliance, or if they think the performance indicators or performance targets to be unreasonable. Policy mandates cannot increase student success alone; before any dramatic gains in student success, colleges must internalize the value of student success. My informal interviews with policymakers and college presidents in England convinced me that English policy was successful in convincing colleges to internalize the importance of student success.

In England the report *Unfinished Business* (Audit Commission & Office for Standards in Education, 1993), which showed the low retention and success rates in further education colleges, was instrumental in convincing college administrators and faculty that these problems needed urgent repair. Furthermore, equity funding components, such as the disadvantage uplift and ALS funding, show college administrators that the government is a reasonable partner and that it will provide the additional resources to make student success a reality. By contrast, U.S. policies which demand better student outcomes without additional funding that considers educational inputs have been viewed with skepticism (Burke & Associates, 2002; Dougherty & Hong, 2005; Harbour & Nagy, 2005).

Although the English story is a positive one, a note of caution is necessary. Since the 2002–03 academic year, the English government has increasingly coerced further education colleges to serve national economic ends. England has a centralized, as opposed to federalized, system of governance and the central government controls nearly all funding for further education colleges. In 2001 the Department of Education was merged with the Department of Employment to become the Department for Education and Skills (DfES). The recent education policies of the DfES—for example raising fees, cutting funding for adult education, and pressuring colleges to provide training in certain industries (Department for Education and Skills, 2003)—are clearly economically motivated and are resented by many colleges as an infringement on autonomy and a diminished commitment to disadvantaged students. In the coming years the coalition between colleges and the government may crumble. A more thorough discussion is outside a scope of this paper, but one general insight emerges; although centralized education policy can make impressive progress, it can also be hijacked by a narrow economic focus which can hurt the system in the long run. The emerging story will be interesting to watch.

The final policy lesson from this research concerns the use of market-based policies—specifically voucher systems—in education. Interestingly, voucher systems in education were first theorized by American economist Milton Friedman (1955) and first implemented by U.S. school districts (Halsey, Lauder, Phillip, & Stuart Wells, 1997). English further education colleges are funded through a national voucher system in which funding follows students to whatever institution they decide to attend. Similar voucher systems are used to fund English compulsory education

(Glennerster, 2002), and compulsory education in Belgium (Vandenberghe, 1998), and Sweden (Lundahl, 2002).

Despite their widespread use in other countries, voucher systems have not taken root in U.S. education, and the voucher debate remains polemical. Some critics contend that voucher systems will only exacerbate social stratification (Newman, Couturier, & Scurry, 2004). Indeed, this can be true. For example, the new voucher system for higher education in Colorado pays a flat rate to all residents, which wealthy families may use to supplement their existing income (Harbour et al., 2006).

Clearly, voucher systems pose legitimate questions of concern. Will for-profit institutions be eligible for voucher funding? Will religious institutions be eligible for voucher funding, thereby diluting the separation between church and state? What about the stratification of educational achievement? School choice tends to create a sorting hat where the best students—typically having the most informed and engaged parents—are concentrated in the same schools while the worst students are concentrated in others (Vandenberghe, 1998). Indeed, this has been a problem in English compulsory education (Ball et al., 2000). However, does this problem persist in adult education, where there are often few affordable providers within a reasonable geographic distance?

On the other hand, voucher systems can tailor funding to individualized student needs in a way that block funding cannot. Depending on the particular funding formula used, voucher systems can exacerbate educational inequalities or they can promote educational equality. The English voucher system promotes vertical equity. It pays tuition for disadvantaged students and, as Figure 1 showed, colleges receive more funding for enrolling students that require additional resources to be successful.

In conclusion, this research calls for a more nuanced discussion of voucher systems in education. Voucher systems are policy tools that give institutions incentives to achieve outcomes that are rewarded by the funding formula. They are neither inherently good nor inherently bad; the policy details matter a great deal.

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Appendix

Table A-1

Sample Size: Qualifications by Year and Subgroup

Variable	1998–99	1999–00	2000–01	2001–02	2002–03
Overall	1,509,393	1,687,464	1,692,394	1,646,138	1,771,842
Deprivation Index					
Deprivation LT 10	329,810	365,731	365,396	369,394	371,588
Deprivation 10-<20	436,658	483,795	480,302	470,287	491,029
Deprivation 20-<30	278,732	309,921	307,696	295,890	317,918
Deprivation 35-<50	322,034	362,924	366,418	349,254	396,008
Deprivation 50+	142,159	165,093	172,582	161,313	195,299
Ethnicity					
Bangladeshi	7,755	9,114	10,295	11,604	15,677
Black-African	33,780	38,409	45,118	49,322	64,450
Black-Caribbean	30,092	33,403	31,710	34,666	41,738
Black-Other	11,243	12,882	13,599	10,587	11,632
Chinese	8,899	10,437	9,944	9,665	12,785
Indian	29,268	37,855	35,799	35,916	43,477
Pakistani	31,013	33,540	35,455	34,505	40,668
White	1,177,380	1,260,058	1,210,861	1,129,889	1,311,190
Asian-Other	17,681	23,764	29,420	30,670	36,637
Gender					
Male	569,048	631,287	636,922	626,456	673,948
Female	940,345	1,056,177	1,055,472	1,019,682	1,097,894
Age					
Age 19–25	363,485	390,459	388,885	367,617	412,494
Age 26–34	426,861	454,255	434,282	394,028	418,390
Age 35–44	378,978	424,700	421,507	403,925	426,266
Age 45–54	221,082	255,302	257,197	256,781	261,555
Age 55+	118,987	162,748	190,523	223,787	253,137
Disabled	83,927	108,009	139,531	157,727	204,372
Qualification level ^a					
Entry & level 1	439,825	621,675	624,377	619,177	858,984
Level 2	372,908	476,299	448,887	431,416	434,292
Level 3	272,344	322,010	318,419	293,362	294,696
Level 4 or Higher	51,581	36,115	31,324	25,233	34,092
Other	372,735	231,365	269,387	276,950	149,778
External assessment					
Not externally assessed	331,466	164,134	199,966	293,008	448,577
Externally assessed	1,177,927	1,523,330	1,492,428	1,353,130	1,323,265
Qualification duration					
LT 24 Weeks	494,352	603,543	641,736	659,468	748,634
24-<48 Weeks	830,882	875,065	861,214	818,652	844,314
48+ Weeks	184,159	208,856	189,444	168,018	178,894

Variable	1998–99	1999–00	2000–01	2001–02	2002–03
Mode of attendance					
Full-time, full-year	302,482	323,105	312,304	285,149	319,136
Full-time, part-year	82,854	98,716	111,348	118,090	114,797
Part-time	1,124,057	1,265,643	1,268,742	1,242,899	1,337,909
Open/distance learning	83,674	61,012	78,916	123,820	127,065
Funding Determinants					
Receive access funding ^b			70,526	74,232	149,949
Postcode disadvantage uplift	440,432	454,575	451,883	429,449	516,141
On benefit	254,439	276,424	253,293	226,068	271,579
ABE student	119,546	149,385	155,942	160,031	243,046
Asylum seeker	5,438	14,197	24,311	27,710	35,323
Additional Learning Support	81,054	105,700	133,967	127,717	164,280

^a Qualification level in 2002–03 not comparable to previous years due to change in definitions for how qualification level was defined.

^b The access funding program did not begin until the 2000–01 academic year

Table A-2
Full-Model Regression Results

Variable	1998–99	1999–00	2000–01	2001–02	2002–03
Socioeconomic determinants					
Deprivation (ref = LT 10)					
Deprivation 10-<20	0.96***	0.95***	0.94***	0.94***	0.94***
Deprivation 20-<30	0.90***	0.88***	0.86***	0.88***	0.89***
Deprivation 30-<50	0.82***	0.81***	0.78***	0.81***	0.82***
Deprivation 50+	0.71***	0.73***	0.71***	0.75***	0.77***
Female	1.25***	1.20***	1.20***	1.18***	1.21***
Disabled	0.93***	0.98	0.93***	0.89***	0.97***
Ethnicity (ref= white)					
Asian-other	0.81***	0.82***	0.80***	0.81***	0.77***
Bangladeshi	0.81***	0.75***	0.80***	0.83***	0.92***
Black-African	0.74***	0.82***	0.76***	0.76***	0.74***
Black-Caribbean	0.72***	0.76***	0.76***	0.76***	0.71***
Black-other	0.71***	0.73***	0.75***	0.75***	0.69***
Chinese	0.79***	0.79***	0.82***	0.83***	0.87***
Indian	0.90***	0.90***	0.91***	0.95***	1.00
Pakistani	0.76***	0.74***	0.64***	0.77***	0.81***
Age (ref= 19–25)					
Age 26–34	1.17***	1.20***	1.25***	1.28***	1.26***
Age 35–44	1.28***	1.32***	1.39***	1.44***	1.44***
Age 45–54	1.17***	1.21***	1.30***	1.38***	1.45***
Age 55+	0.93***	1.05***	1.13***	1.27***	1.43***
Region (ref= South East)					
East Anglia	1.00	1.05***	1.10***	0.90***	0.93***
East Midlands	1.17***	1.27***	1.12***	1.09***	1.07***
Greater London	0.86***	0.94***	1.07***	0.91***	1.01
North East	1.21***	1.35***	1.57***	1.22***	1.10***
North West	1.02	1.24***	1.38***	1.28***	1.16***
South West	1.23***	1.18***	1.19***	1.09***	1.05***
West Midlands	1.12***	1.24***	1.25***	1.11***	1.03***
Yorkshire Humberside	1.14***	1.20***	1.26***	1.06***	1.04***
Qualification determinants					
Qualification level ^a					
(ref = level 1)					
Level 2	1.09***	1.02***	0.96***	0.96***	0.91***
Level 3	1.18***	1.20***	1.15***	1.09***	1.00
Level 4 & 5	1.07***	0.80***	0.75***	0.78***	0.86***
Other level	1.49***	1.48***	1.37***	0.92***	1.47***
Externally assessed	0.82***	0.88***	0.92***	0.68***	0.70***

Variable	1998–99	1999–00	2000–01	2001–02	2002–03
Area of learning (ref= tourism/hospitality)					
ABE	0.82***	0.77***	0.97	0.90***	0.71***
Agriculture	0.72***	0.81***	0.64***	0.68***	0.69***
Art & design	0.68***	0.65***	0.73***	0.77***	0.79***
Business	0.75***	0.73***	0.92***	0.71***	0.84***
Construction	1.05*	0.98	1.01	0.91***	0.79***
Engineering	0.96*	0.81***	0.95**	1.04	0.93***
Health & care	1.21***	1.06***	1.16***	1.07***	1.14***
Humanities	0.66***	0.60***	0.65***	0.55***	0.58***
Science, math, IT	0.68***	0.60***	0.66***	0.54***	0.61***
Qualification type (ref= “other”)					
A/AS	0.62***	0.55***	0.67***	0.77***	0.82***
GNVQ	0.84***	0.94*	0.81***	0.79***	0.93*
HE access	1.04	0.83***	0.89***	0.92***	0.90***
NVQ	0.74***	0.67***	0.61***	0.64***	0.69***
pre GNVQ	1.11***	1.02***	0.88***	0.82***	1.12***
Student mode of attendance (ref= full-time full-year)					
Full-time part-year	1.06***	1.14***	1.32***	1.47***	1.29***
Part-time	0.82***	0.83***	0.99	1.06***	0.96***
Qualification duration (ref= LT 24 weeks)					
24-<48 weeks	0.67***	0.71***	0.63***	0.56***	0.61***
48+ weeks	0.51***	0.47***	0.47***	0.38***	0.47***
Open/distance education	0.64***	0.79***	0.65***	0.50***	0.55***
Dedicated employer provision	0.89***	1.13***	1.50***	1.41***	1.88***
Employee release	1.28***	1.19***	1.30***	1.38***	1.48***
Qual is not highest level taken	1.20***	1.23***	1.17***	1.14***	1.00
Institution level determinants					
College size (ref= LT 15,000)					
15,000–25,000 students	1.02*	0.94***	0.96***	0.96***	0.89***
8,000–15,000 students	0.99	0.99	0.97***	0.95***	0.90***
GT 25,000 students	0.82***	0.96***	0.94***	0.83***	0.89***
Population density (ref= urban)					
Rural	0.98	1.00	1.03***	1.06***	1.06***
Town	0.99	0.98*	1.01	1.06***	1.03***
Tertiary college (ref= general further education college)	1.06***	0.97***	0.96***	0.90***	0.99
Funding determinants ^b					
Postcode disadvantage uplift	0.99	0.99	1.00	0.97***	0.98***
Additional learning support	1.31***	1.26***	1.24***	1.43***	1.52***
Access funding ^c			1.00	0.98	1.13***
Means tested benefit	0.69***	0.71***	0.75***	0.80***	0.73***
Basic skills learner	0.81***	0.91***	1.08***	1.08***	1.16***
Asylum seeker	0.85***	0.71***	0.90***	0.82***	0.80***

Variable	1998–99	1999–00	2000–01	2001–02	2002–03
Program weighting factor (ref = A = 1.00)					
B=1.12	1.06***	1.04***	1.15***	1.07***	1.00
C=1.3	0.94***	1.05***	1.21***	1.05***	1.17***
D=1.6	0.85***	0.90***	1.19***	0.86***	1.10***
E=1.72	0.95	0.88*	1.47***	1.21***	1.10*
F=1.4	0.70***	0.78***	0.65***	0.69***	0.87***
Model Fit Statistics					
Number of cases	1,244,985	1,608,931	1,622,600	1,629,278	1,771,656
Raw student success rate	56.4%	59.6%	61.8%	64.2%	66.9%
-2 log L	1,619,075	2,073,899	2,055,472	1,997,139	2,121,875
Pseudo r-square	0.09	0.079	0.084	0.104	0.096
Chi-square	86,148	96,399	103,144	128,778	126,941
Degrees of freedom	74	74	75	75	75

^a Percentages for 2002–03 not comparable to previous years due to change in definitions for how qualification level was defined.

^b The reference group for each funding determinant is qualifications not having that characteristic. For example, the odds ratio for Additional Learning Support shows the regression adjusted odds of success in comparison to qualifications that do not receive Additional Learning Support.

^c The access funding program did not begin until the 2000–01 academic year

* $p < .01$, ** $p < .001$, *** $p < .0001$

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